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A \$100 Million U.S. Mistake: Radar Would Jam Satellites

By Thomas O'Toole

Washington Post Staff Writer

The National Aeronautics and Space Administration, which had planned to launch two giant satellites in 1980 to communicate with all of its other orbiting craft, has belatedly discovered that because of interference from Russian radar in Europe the satellites will not work.

The space agency is now redesigning the satellites' electronic systems, the engineering model of which had already been built. It now expects the launch to be delayed at least three months, and the extra cost to amount to \$100 million.

The tracking and data relay satellite is a giant orbiting transmitter and receiver whose two umbrella-like antennas weigh 50 pounds apiece and unfurl in space to a diameter of 16.5 feet. The satellites are being built to replace 60 percent of the antennas NASA uses on earth at an estimated saving of more than \$100 million a year.

NASA's plans call for an eventual total of six of the 5,000-pound satellites, and it awarded a \$786 million contract to Western Union to build and operate them.

The electronic interference, which is not deliberate but comes from routine activities of the large Soviet radar installations that ring Eastern Europe, was not identified as a problem until last December, well after the contract had been awarded.

"The people involved did not fully understand the environment and the effects it would have on the system," said C. Curtis Johnson, tracking and data relay satellite project manager at Goddard Space Flight Center. "Otherwise, we would have been more careful in the specifications of the system."

The first satellite was scheduled to be carried into orbit in July 1980 by the space shuttle. The three-month delay is important because NASA wants the satellite to be communicating with the shuttle as shuttle flights increase in 1980. And tracking station contracts NASA has with other countries will be expiring about that time.

White House and Capitol Hill sources said that part of the reason for the belated discovery of the problem is that Pentagon and the Central Intelligence Agency never alerted NASA to the size and scope of the radio interference caused by Soviet radars in the high orbit regions to be occupied by the tracking and data relay satellites.

Sources said this is one reason the White House two weeks ago set up a policy review committee of 16 federal agencies to make sure space project staffs were fully aware of all the issues that might have an impact on them.

Two Senate committees are looking into the reasons for the sudden cost increase in the NASA satellite pro-

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